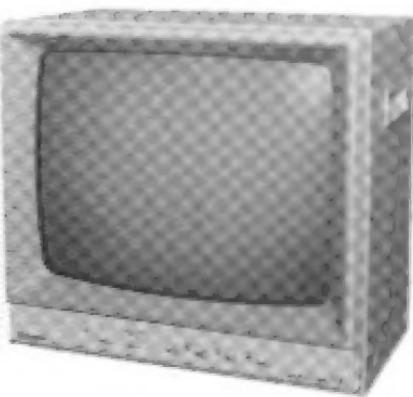


Video Monitor

WV-BM1900

Operating Instructions



Panasonic®

Before attempting to connect or operate this product,
please read these instructions completely.

**CAUTION**RISK OF ELECTRIC SHOCK
DO NOT OPEN**CAUTION:**

TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER SERVICABLE PARTS INSIDE.
REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.



SA 1965

The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



SA 1966

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

WARNING:

TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.

For U.S.A.

Warning:

This equipment generates and uses radio frequency energy and if not installed and used properly, i.e., in strict accordance with the instruction manual, may cause harmful interference to radio communications. It has been tested and found to comply with the limits for a Class A computing device pursuant to Subpart J of Part 15 of FCC Rules, which are designed to provide reasonable protection against such interference when operated in a commercial environment.

The serial number of this product may be found on the bottom of the unit.

You should note the serial number of this unit in the space provided and retain this book as a permanent record of your purchase to aid identification in the event of theft.

Model No. _____

Serial No. _____

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PREFACE

The Panasonic WV-BM1900 is a desk-top closed circuit Video Monitor especially designed for surveillance and studio applications.

This monitor features a 18-5/8" (47cm) diagonal actual visual size and produces sharp, black-and-white pictures with horizontal resolution of more than 850 lines at centre.

Front mounted controls permit fast picture adjustment. Standard BNC-type input and output connectors enables WV-BM1900 to be used with other CCTV monitors or Panasonic Video Tape Recorder.

FEATURES

- 18-5/8" (47cm) diagonal actual visual size
- 850 lines of horizontal resolution at centre
- DC restoration On/Off switch is provided.
- Selectable of under or normal scan size
- Short H. AFC time constant for VTR playback.

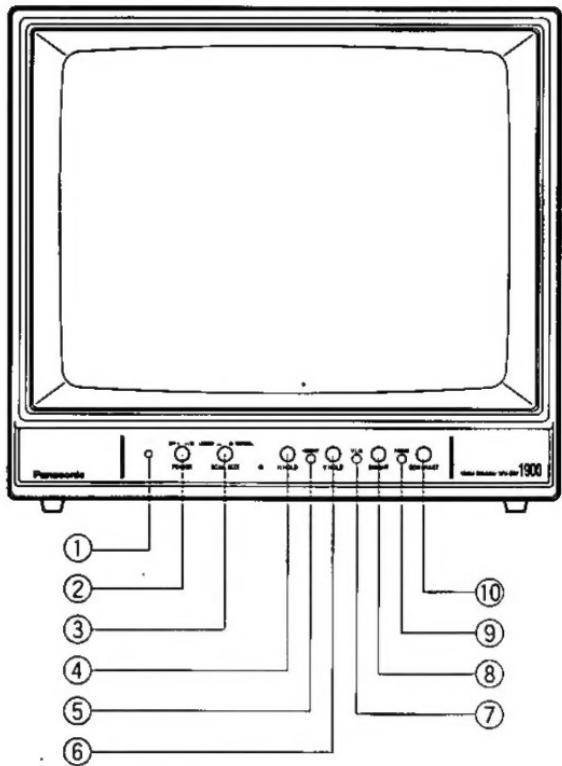
- Looping through BNC connectors for video and sync input and output
- Internal/External Sync mode (switchable)
- Rackmount is available with optional rack mount adaptor

PRECAUTIONS

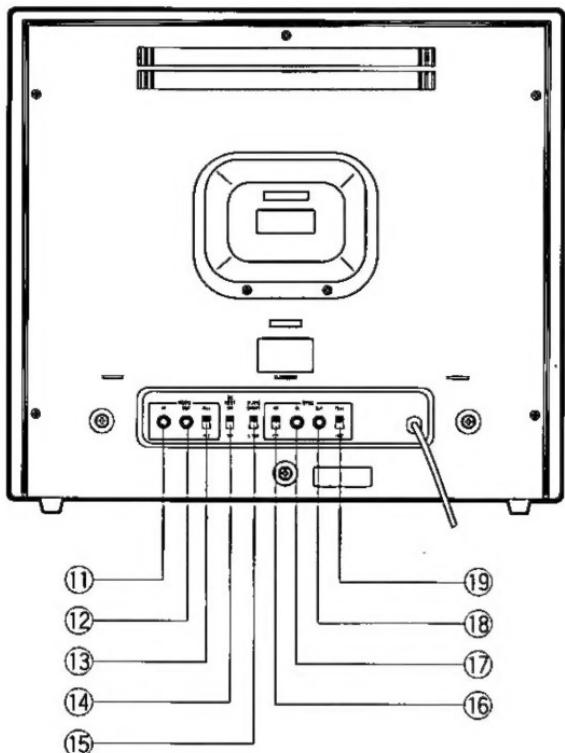
- This unit is designed for indoor use. Operable ambient temperature range must not range beyond 14°F-122°F (-10°C +50°C), and permissible humidity is less than 90%. Avoid using the monitor under direction sunlight.
- The input power source must be 120V AC, 60Hz.
- Do not block the ventilation slots on the rear panel.
- When mounting this monitor in an EIA standard 19" rack, be careful to insure that the interior temperature of the rack does not exceed 122°F (+50°C).

MAJOR OPERATING CONTROLS AND THEIR FUNCTIONS

< FRONT VIEW >



< REAR VIEW >



1. Power Indicator

When turning on the Power On/Off Switch (2), this indicator lights.

2. Power On/Off Switch (POWER, ON/OFF)

This switch is used to turn on or off the power of this monitor.

3. Scan Size Switch (SCAN SIZE UNDER/NORMAL)

Underscanning is obtained by pressing this switch.

4. Horizontal Hold Control [H-HOLD]

This control is used to lock in the picture horizontally.

5. Height Control [HEIGHT]

Adjust the vertical height of the picture.

6. Vertical Hold Control [V-HOLD]

This control is used to lock in the picture vertically.

7. Vertical Linearity Control (V-LIN)

Adjust for vertical distortion of the picture.

8. Bright Control [BRIGHT]

Turn this control clockwise to increase the overall brightness.

9. Focus Control [FOCUS]

Adjust for the clearest picture.

10. Contrast Control [CONTRAST]

Turn this control clockwise to increase the picture contrast.

11. Video Input Connector (VIDEO IN)

This connector accepts the input video signal.

12. Video Output Connector (VIDEO OUT)

The video input signal connected to the Video Input Connector (11) is looped through to this connector.

13. Video Termination Switch (VIDEO 75Ω/HIZ)

When bridging or looping through the video signal, set this switch to Hi-Z position, and for other cases this switch should be set to 75Ω position.

14. DC Restoration Switch (DC REST ON/OFF)

Switch to restore background of picture.

15. H.AFC Switch (H.AFC SHORT/LONG)

Set this switch to the SHORT position (short H.
AFC time constant) for VTR playback.

16. Sync Selection Switch (SYNC INT/EXT)

17. Sync Input Connector (SYNC IN) (BNC)

18. Sync Output Connector (SYNC OUT) (BNC)

19. Sync Termination Switch (SYNC 75Ω/Hi-Z)

When bridging or looping through the external
sync signal, set this switch to the Hi-Z position,
and for other cases this switch should be set to the
 75Ω position.

CONNECTIONS

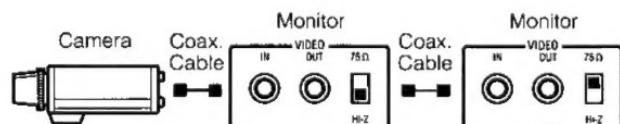
Power Cable

1. Keep the power of this monitor to the OFF position during connection.
2. Connect the Power Cord to a 60Hz grounded electrical outlet 120V AC.

Video Cable

Note :

- Always set the last monitor's Video Termination Switch to $75\ \Omega$, and set the Video Termination Switch of Intermediate monitors to Hi-Z.



- Use the RG-59/U (3C-2V), RG-6/U (5C-2V), RG-11/U (7C-2V) or RG-15/U (10C-2V) coaxial cable.
- 1. Up to 10 monitors can be hooked up in this configuration before signal loss occurs. Total cable length should not exceed 150m (500 feet)

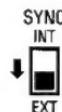
2. Wiring Precautions :

- Do not bend coaxial cable into a curve whose radius is smaller than 10 times its diameter.
- Never staple the cable - not even with circular staples.
- Never crush or pinch the cable.
All these will change the impedance of the cable and cause poor picture quality.

External Sync

When a non-composite video signal is connected to the monitor, it will be necessary to connect an external composite sync signal to the monitor.

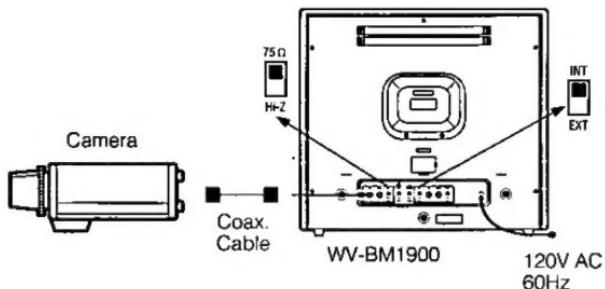
1. Connect the Sync Input Connector (17) on the video monitor to the sync signal source by means of a $75\ \Omega$ coaxial cable.
2. Set the Sync Selector Switch (16) to the EXT position.



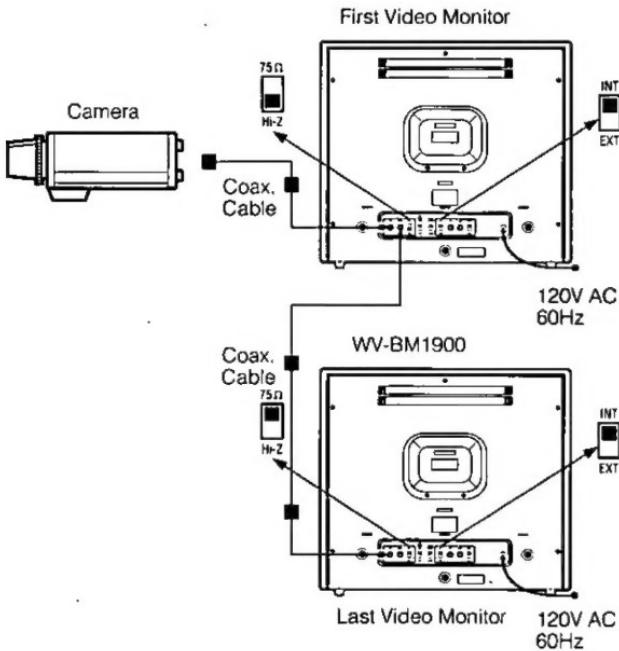
3. The operation of Sync Termination Switch (19) is the same as Video Termination Switch (13).

SYSTEM CONNECTIONS

1. Single Monitor Connection



2. Multiple Monitor Connection



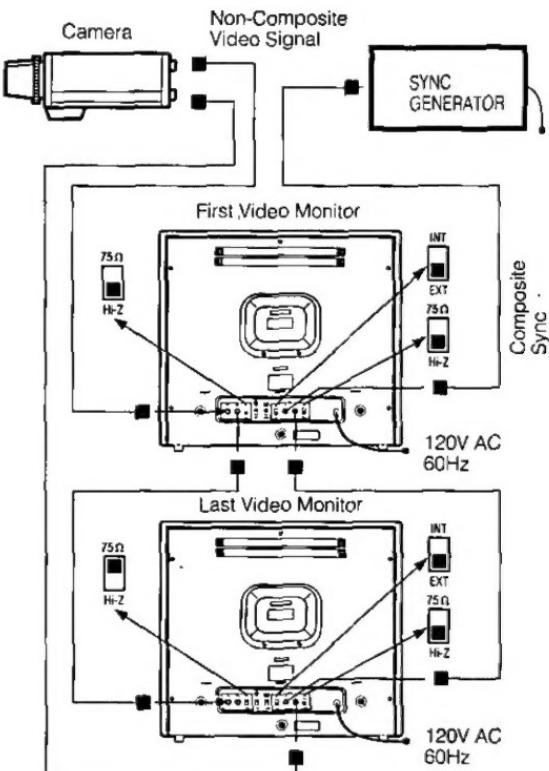
- Connect the Video Input Connector (11) on this monitor to the Video Output Connector of the camera with 75-ohm coaxial cable.

- Connect the Video Output Connector (12) on the first monitor to the Video Input Connector (11) on the second monitor with 75-ohm coaxial cable. Continue until all monitors are connected.
- Set the Video Termination Switch (13) of the first and intermediate monitors at Hi-Z position. Then set the Video Termination Switch (13) of the last monitor to 75Ω position.

3. When used with External Sync

When a non-composite video signal is connected to the video monitor, an external composite SYNC signal must also be connected to the video monitor.

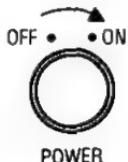
- Connect the Video Input Connector (11) on the video monitor to the Video Output Connector of the camera with 75-ohm coaxial cable.
- Connect the Video Output Connector (12) on the first monitor to the Video Input Connector (11) on the second monitor with 75-ohm coaxial cable. Continue until the video signal is connected to all monitors.
- Set the Video Termination Switch (13) of the first and intermediate monitors to the Hi-Z position. These set the Video Termination Switch (13) of the last monitor to the 75Ω position.



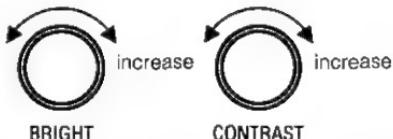
- Set the Sync Selector Switch (16) to the EXT position.
- Connect the Sync Input Connector (17) on the video monitor to the sync signal source with 75-ohm coaxial cable.
- Connect the Sync Output Connector (18) on the first monitor to the Sync Input Connector (17) on the second monitor with 75-ohm coaxial cable.
- Continue until the sync signal is connected to all monitors.
- Connect the Sync Output Connector (18) on the last monitor to the Sync Input Connector on the camera with 75-ohm coaxial cable.
- Set the Sync Termination Switch (19) of the monitors to Hi-Z position. The sync signal is terminated with 75-ohm in the camera.

OPERATING PROCEDURE

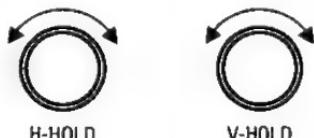
- Set the Power On/Off Switch (2) to the ON position.



- Adjust the Bright Control (8) and Contrast Control (10).



- Adjust the Horizontal Hold Control (4) until the picture is stabilized, if the picture slips to either side, or appears as a series of horizontal strips.
- Adjust the Vertical Hold Control (6), if the picture rolls up or down.



- Height Control

This recessed screwdriver control should be adjusted simultaneously to give proper vertical height consistent with good vertical linearity.

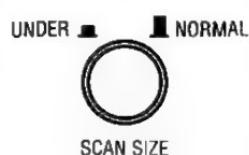
Adjustment should be made to extend the picture limits approximately 1/10" beyond the top and bottom edges of the mask at over scanning operation.

- Vertical Linearity Control

This recessed screwdriver control should be adjusted to give good vertical linearity.

- Underscanning Operation

Set the Scan Size Switch (3) to the UNDER position to obtain the underscanning.

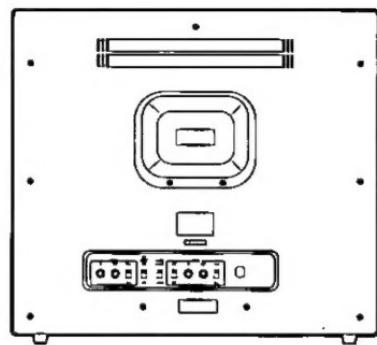
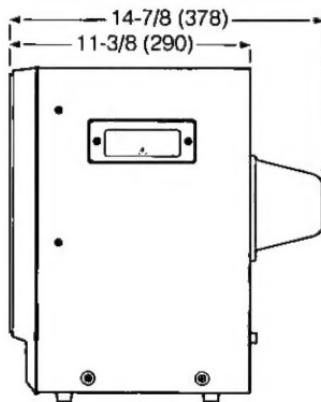
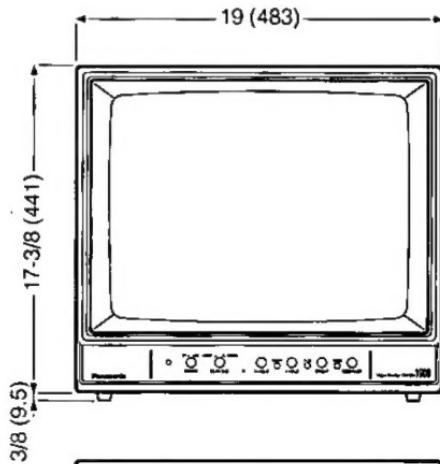


- DC Restoration

DC restoration circuit provides a stable reference for the black level. Set the switch to the ON position to prevent excessive contrast and preserve shadow detail.

APPEARANCE

Unit: inches (mm)



SPECIFICATIONS

Power Source :	120V AC at 60Hz
Power Consumption :	Approx. 70 watts
Video Input :	0.5 - 2.0 Vp-p composite/75Ω or Hi-Z looping through 0.2 - 1.7 Vp-p non-composite/75Ω or Hi-Z looping through 2.0 - 5.0 Vp-p composite/75Ω or Hi-Z looping through
External Sync Input:	2.0 - 5.0 Vp-p composite/75Ω or Hi-Z looping through
Horizontal Resolution :	More than 850 lines at centre
Maximum Video Gain :	42 dB
H. AFC Time Constant :	Short time constant for industrial VTRs
Sweep Linearity :	Less than 10% at overscan
Sweep Geometry :	Less than 2% at overscan
Overscanning :	Approx. 5%
Scanning :	Overscan or underscan switchable
DC Restoration :	Yes
CRT Size :	19-7/8" (50cm) diagonal
Actual Visual Size :	18-5/8" (47cm) diagonal
High Voltage :	DC 18kV
Ambient Operating temperature :	14°F-122°F (-10°C - +50°C)
Ambient Operating Humidity :	Less than 90%
Dimensions :	19-3/16"(W) x 17-3/4"(H) x 14-7/8"(D) (483(W) x 450.5(H) x 378(D)mm)
Weight :	40.7 lbs. (18.5 kg)

Weight and dimension indicated above are approximate.

Specifications are subject to change without notice.

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